Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-396. Canceled.

397. (New) A method, comprising:

administering, through a skin of a patient in need thereof, an uncured castor-oil based polyurethane bone scaffold composition in or near a bone defect, wherein the polyurethane bone scaffold comprises calcium carbonate, and wherein the bone scaffold composition in its final, cured state has an average pore size of from about 5 microns to about 500 microns, a compressive strength of at least about 50 MPa, and is osteoconductive;

manipulating said bone scaffold composition *in situ* using external pressure applied to the skin of the patient; and thereafter,

allowing said bone scaffold composition to become fully cured *in situ*.

398. (New) A method according to claim 397, wherein said bone scaffold composition is administered percutaneously.

399. (New) A method according to claim 397, wherein said bone scaffold composition partially cures into a shape, and said manipulating alters the shape of said partially-cured bone scaffold composition.

400. (New) A method according to claim 397, wherein said manipulating positions the bone scaffold composition into the defect in the bone.

401. (New) A method according to claim 397, wherein said calcium carbonate is present in said bone scaffold composition in an amount ranging from about 0.01% to about 30% by weight of the bone scaffold composition.

402. (New) A method according to claim 397, wherein the bone scaffold composition remains in a manipulable state at room temperature for at least about 20 minutes after formulation.

403. (New) A method according to claim 397, wherein the bone scaffold composition attains a final, cured state within about 48 hours after formulation.

404. (New) A method according to claim 397, wherein the bone scaffold composition in its final, cured state has a tensile strength of at least about 40 MPa.

405. (New) A method according to claim 397, wherein the bone scaffold composition in its final, cured state has a Modulus of Elasticity of at least about 1,500 MPa.

406. (New) A method according to claim 397, wherein the bone scaffold composition comprises water in an amount ranging from about 0.1% to about 1% by weight of the bone scaffold composition.

407. (New) A method according to claim 397, wherein the composition in its final, cured state has a Shore D hardness suitable for a bone scaffold material.

408. (New) A method according to claim 407, wherein the Shore D hardness is similar to bone.

409. (New) A method, comprising:

administering, through a skin of a patient in need thereof, an uncured polyurethane bone scaffold composition in or near a bone defect, wherein the polyurethane bone scaffold in its final, cured state has an average pore size of from about 5 microns to about 500 microns, and a compressive strength consistent for use in bone repair;

manipulating said bone scaffold composition in situ using external pressure applied to the skin of the patient; and thereafter,

allowing said bone scaffold composition to become fully cured *in situ*.

410. (New) A method according to claim 409, wherein the polyurethane bone scaffold composition is osteoconductive.

411. (New) A method according to claim 409, wherein the polyurethane bone scaffold composition further comprises calcium carbonate.

412. (New) A method according to claim 411, wherein the polyurethane bone scaffold composition comprises a castor-oil based polyurethane.

413. (New) A method, comprising:

administering, through a skin of a patient in need thereof, an uncured polyurethane bone scaffold composition in or near a bone defect;

manipulating said bone scaffold composition in situ using external pressure applied to the skin of the patient; and thereafter,

allowing said bone scaffold to become fully cured in situ.

414. (New) A method according to claim 413, wherein the bone scaffold composition is a castor-oil based polyurethane composition.

415. (New) A method according to claim 414, wherein the castor-oil based polyurethane composition comprises at least one filler material.

416. (New) A method according to claim 415, wherein the at least one filler material is chosen from calcium carbonate, bone, calcium phosphate, calcium pyrophosphate, hydroxyapatitic, poly methyl methacrylate, glass-ionomer, poly ether ether ketone, calcium sulfate, and tricalcium phosphate.

417. (New) A method according to claim 416, wherein the at least one filler material is bone chosen from demineralized bone, allograft bone, and autogenous bone.

418. (New) A method according to claim 416, wherein the at least one filler material is calcium phosphate, and the calcium phosphate is beta tricalcium phosphate.

419. (New) A method according to claim 413, wherein the bone scaffold composition further comprises at least one substance chosen from radiotransparent substances and radiopaque substances.